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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,294	09/13/2005	Juha Majjala	TAMPPAT-14	1070
36528	7590	12/11/2007	EXAMINER	
STIENNON & STIENNON 612 W. MAIN ST., SUITE 201 P.O. BOX 1667 MADISON, WI 53701-1667			PARKER, FREDERICK JOHN	
			ART UNIT	PAPER NUMBER
			1792	
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			12/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/534,294	Applicant(s) MAIJALA ET AL.	
	Examiner Frederick J. Parker	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claim Objections

The amendments in response to the Claim Objections of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the objections.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 7, 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation of "contacting the selected polymeric binder...with a hot surface" and "one of said two...is brought into contact with the polymeric binder" are New Matter because the original filing does not require direct contact between any heated means and the polymer. The Examiner also points out Applicants did not cited page/line citations for newly added claim limitations, but a perusal of the original filing failed to find support. New Matter rejections are therefore appropriate.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 7-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai et al EP 982 120. All citations are examples; there would be additional support throughout the reference.

Arai et al teaches a method for coating paper webs which may include fibers[0022] comprising the steps of forming a coating powder made up of an appropriately proportioned mixture of an inorganic fine particle component and an organic powder binder component which is applied by electrostatic means [0080] (see figure 3 and accompanying texts) onto the web 32 by a negatively charged applicator (necessarily comprising an electrode) 38, with oppositely charged electrode 36 beneath the web. The powdery coating on the web is transported to dual nip fixing rollers 35 where the coating is heated and fixed ("finishing") to the web substrate [0081-82] (see also figure 3 and accompanying text). Since the heating/ fixing involves at least some degree of melting [0082,93, etc], as does Applicants process [0007], the reference meets the limitation of a temperature above a selected glass transition temperature.

The reference does not cite the same semantics and wording used by applicants: G' , G'' , loss factor, rubbery state plateau, etc. It does have to because the processes of the reference and as claimed, when read in view of the specification, are essentially the same. Applicants teach that polymer materials used may be styrene-butadiene or acrylate copolymers, therefore the cited properties of materials would have been inherent to both reference and Application. See Specification [0007] and Arai et al , see [0028]. As established above, both require at least some melting during the heating/ fixing step. Simply because Applicants have chosen to describe the process differently/ more technically than Arai does not impart patentability to the process, particularly given the fact the processes appear otherwise the same. It would have been apparent that fixing / heating temperatures would have been dependant upon the thermal properties of the

polymer/s being used in the coating. Clearly, one skilled in the art would not have selected an arbitrary temperature or a single temperature for all coating compositions. If melting/ viscosity of melt became an issue during processing, reducing processing temperature until a suitable temperature limiting melting or optimizing plasticity was reached is well-within the purview of the skilled artisan. The same argument is made for linear load, dwell time, etc which would have been determined by routine experimentation because such parameters dictate the amount of time the coating sees the elevated temperature at rollers 35 and therefore the degree of fixing/ melting as required by Arai. Where general conditions of a claim are disclosed in the prior art, it is not inventive to discover optimum or workable ranges by routine experimentation, In re Aller 105 USPQ 233. Reaction conditions do not patentably distinguish over the prior art where they constitute merely modifications of an old process which one skilled in the art would be capable of making, In re Budde 138 USPQ 71. Critical thermal properties are available in standard texts, the internet, etc. Thus Applicants specific loss factors and moduli of claims 8-12,14-17 are deemed to be simply matters of variation due to different coating materials which are not cited by the reference but would have been present because they represent inherent materials properties. When a reference discloses the limitations of a claim except for a property/ies, and the Examiner cannot determine if the reference inherently possesses those properties noted above, the burden is shifted to Applicant/s, In re Fitzgerald 205 USPQ 594 and MPEP 2112.

As to the new limitations regarding the polymer contacting a hot finishing surface, the Examiner points out that (1) from Arai it would have been apparent that the heated finishing means would have necessarily contacted at least some portions of the polymer in the polymer powder-inorganic powder mixture, and (2) Applicants' claim language does not prohibit

inorganic particles from contacting the heated finishing means. The Examiner also points out there is no support for Applicants new limitations, they being deemed New Matter above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the method of Arai et al and determining specific process variables dependant on the coating materials used in order to optimize the end-use product in providing the organic-inorganic coated sheet cited by Arai et al.

Response to Arguments

Applicants Remarks and arguments have been fully considered. Applicants argument that Arai has inorganic particles on polymer particles in the organic-inorganic powder mixture is not convincing because (1) from Arai it would have been apparent that the heated finishing means would have necessarily contacted at least some portions of the polymer in the polymer powder-inorganic powder mixture, (2) Applicants' claim language does not prohibit at least some inorganic particles from contacting the heated finishing means, and (3) the new claim limitation does not require DIRECT and/or EXCLUSIVE contact of the binder material with the contacting surface during processing. The Examiner also points out there is no support for Applicants new limitations, they being deemed New Matter above. Interestingly, Applicants' admit the process of Arai would not adhere to counter surfaces (page 7, bottom). Applicants arguments regarding "counter surfaces" is not commensurate with the scope of claims 7-12 and therefore need not be further addressed. Regarding claims 13-17, the claims are directed to formulating a paper coating and its application to a web, which is what Arai does; the similar products would therefore inherently possess similar use capabilities.

Applicants cite the novelty of using the relationship between G''/G' and T_g , and refer their discussion to figures 1-2. Reading of the text regarding the figures in the specification (p. 10) is unconvincing. Applicants explanations of the meanings of G''/G' are unclear, and the Examiner's attempt to understand these terms and evaluation of novelty by looking at internet definitions or assistance from an organic chemistry examiner were unsuccessful. The issue was further complicated by Applicants' own admission in [0021] that figure 2 may or may not stick to surfaces during processing. This renders Applicants arguments confusing and precarious. Therefore, Applicants have supplied neither a reasonable and understandable explanation of patentability over the prior art, nor a convincing showing to convince this Examiner of patentability. The Examiner therefore maintains the rejections as a prima facie case of obviousness over claims 7-17.

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571/272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Frederick J. Parker
Primary Examiner
Art Unit 1792

fjp